BC Hydro and Power Authority

2016/17 – 2018/19
SERVICE PLAN

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BC Hydro's Service Plan can be found online at BC Hydro's Service Plan

Accountability Statement

The 2016/17 - 2018/19 BC Hydro service plan was prepared under the Board's direction in accordance with the *Budget Transparency and Accountability Act* and the BC Reporting Principles. The plan is consistent with government's strategic priorities and fiscal plan. The Board and Management are accountable for the contents of the plan, including what has been included in the plan and how it has been reported. The Board is responsible for the validity and reliability of the information included in the plan.

All significant assumptions, policy decisions, events and identified risks, as of January 31, 2016 have been considered in preparing the plan. The performance measures presented are consistent with the Taxpayer Accountability Principles, BC Hydro's mandate and goals, and focus on aspects critical to the organization's performance. The targets in this plan have been determined based on an assessment of BC Hydro's operating environment, forecast conditions, risk assessment and past performance.

W.J. Brad Bennett

Board Chair

Table of Contents

Accountability Statement **3**

Strategic Direction and Context **5**

Performance Plan **6**

Financial Plan **13**

Summary Financial Outlook 13

Key Forecast Assumptions and Sensitivity Analysis 14

Management Perspective on Future Financial Outlook 15

Capital Plan and Major Projects 16

Appendices **23**

Appendix A: Hyperlinks to Additional Information 23

Appendix B: Subsidiaries and Operating Segments 24

Strategic Direction and Context

Strategic Direction

BC Hydro is one of the largest electric utilities in Canada. We generate and provide electricity to 95 per cent of British Columbia's population and serve over four million people. The electricity generated and transmitted to our customers throughout the province has consistently powered B.C.'s economy and quality of life.

BC Hydro's mission is: **To provide our customers with reliable, affordable, clean electricity throughout B.C., safely.** BC Hydro has set out a three-year road map with strategies, performance measures and targets to fulfill our mission on behalf of the Province and our customers; aligned with the objectives set out in the B.C. Government's Mandate Letter, the 10 Year Rates Plan and the Taxpayer Accountability Principles.

BC Hydro is filing rate design and revenue requirement applications to the BC Utilities Commission to support low and predictable rates for customers, and is continuing to implement the government-approved 2013 Integrated Resource Plan to meet growing electricity demand. Key components of the plan include the 10 Year Capital Plan Forecast and the Site C Clean Energy Project, as well as energy conservation programs and other demand side management measures that will exceed the *Clean Energy Act* target to meet 66% of new demand through energy conservation from 2008 to 2020.

BC Hydro will continue to refurbish and expand the electrical system to meet customer requirements today and tomorrow, as well as improve our responsiveness to evolving customer expectations and reduce electricity use through technology and tailored solutions to meet specific customer needs.

Operating Environment

Power Smart is BC Hydro's new brand. It reflects our goal to be Smart about Power in All We Do and underscores our commitment as an organization to work together to meet new and evolving needs from our customers, our workforce and our shareholder.

We have identified four key goals that reflect what success will look like when we deliver on our mission - customers will experience reliable and responsive service; their rates will continue to be affordable; we will fulfill the province's commitment to lead with clean and renewable power; and our workforce and the public will be safe.

Under the framework of the Province's 10 Year Rates Plan and the Taxpayer Accountability Principles, BC Hydro continues to emphasize cost-consciousness and process improvement across our operations and within our workforce. Examples include enhancing work delivery methods and standardizing project management processes.

Hydro-Québec conducts an annual comparison of electricity rates in 21 major North American cities and BC Hydro's rates continue to be among the most affordable in North America. In 2015, BC Hydro ranked third lowest for residential rates, fourth lowest for commercial rates and fifth lowest for industrial rates.

Although we consistently achieve high customer satisfaction ratings, we can improve the way we interact with our customers and deliver our services. We are identifying what our customers will want and may need in the future so we can start to make changes now. This includes the implementation of a multi-faceted customer strategy from technology to service changes to make it easier for our customers to do business with us.

We are also implementing ambitious plans to renew and expand our generation, transmission and distribution system, as well as making operational investments in areas like technology and vehicle fleet, spending on average $2.4 billion per year. Over the past five years, BC Hydro has delivered 563 capital projects at a total cost of $3.94 billion, which is 1.8% under budget in aggregate. Implementing these system projects across the province concurrently can result in competing objectives and resources. We will work across teams, suppliers, and experts to ensure thoughtful assessment of how to successfully deliver these projects on time and on budget while respecting the unique community, environmental and cultural aspects of each project. Through leading practices such as the Progressive Aboriginal Relations designation, BC Hydro will achieve tangible and long term results in areas such as Aboriginal employment, business development, community investment and engagement.

The electricity generated and transmitted throughout British Columbia meets a high standard of reliability. Unlike most other jurisdictions, our electricity generation in British Columbia is over 93% clean due to our system of large hydroelectric facilities and our important partnership with the independent power sector. British Columbia is also a leader in conservation and investments in smart meters and a smart grid are providing our customers with the information they need to be smart about their electricity use and ultimately use less. With continued investments in technology, we will help customers to meet their energy conservation goals while also delivering sustained energy savings that will reduce costs for all ratepayers.

Achieving the results we've set out in our Service Plan isn't possible without our employees and a workforce that can execute their work in a safe manner. As a utility that operates in a high hazard industry, safety is top of mind and we are continuously working to improve our performance through understanding hazards and ensuring appropriate design of assets and related work procedures, while building our safety culture and competencies.

With thoughtful planning, efficient execution of our strategies and investment in strong and respectful relationships, BC Hydro is well positioned to continue to deliver reliable, affordable, clean electricity throughout B.C., safely today and into the future.

Performance Plan

Goals, Strategies, Measures and Targets

BC Hydro's mission is: **To provide our customers with reliable, affordable, clean electricity throughout B.C., safely.** Four strategic goals guide our actions, each supported by corresponding strategies, performance measures and targets. Each performance measure has a definition and rationale, as well as relevant benchmarking measures that allow a comparison of performance over time. These measures track our progress on delivering our core mission to our customers and the shareholder.

BC Hydro's management is responsible for measuring performance against targets, and results are reported to the Board on a quarterly basis and publicly in the Annual Report. The mission and its associated values and strategic goals support transparency and accountability as required by Government under the Taxpayer Accountability Principles.

Goal 1: Set the Standard for Reliable and Responsive Service

BC Hydro will reliably meet the electricity requirements of customers and respond to their evolving expectations by planning and investing in the system to meet future needs and by consistently improving our service.

Strategies

- Ensure the reliability of the generation, transmission and distribution system by effectively implementing capital and maintenance programs to manage overall asset health and secure supply to meet customer load throughout the year.
- Identify and address vulnerabilities in our operating system and develop well practiced emergency response plans to improve overall system reliability.
- Through external benchmarking of North American transmission interconnection practices, review and implement appropriate recommendations to meet customer requirements as identified in the Industrial Electricity Policy Review.
- Make it easier for customers to do business with us through a series of internal and external improvements such as bills that are easier to read, access to critical information including outages, and customer-focussed training for our staff to enhance the overall customer service experience.
- Explore innovative energy conservation solutions such as load curtailment rates.
- Sustain gold-level certification under the Progressive Aboriginal Relations program by maintaining leading practices focused on Aboriginal employment, business development, community investment and community engagement.
- Through early engagement and emphasizing collaboration, respect and mutually beneficial relationships with First Nations, BC Hydro will improve the transparency of its operations and identify their interests in the delivery of our capital projects.

Performance Measures 1-5[1]

Performance Measures	Four Year Avg.	Actual 2013/14	Actual 2014/15	Target 2015/16	**Forecast 2015/16**	Target 2016/17	Target 2017/18	Target 2018/19
SAIDI (duration)[2] [total outage duration (in hours) experienced by an average customer in a year]	3.25	3.59[3]	3.07	3.22	**3.06**	3.22	3.20	3.20
SAIFI (frequency)[2] [Number of sustained disruptions per year] (excluding major events)	1.43	1.56	1.30	1.40	**1.46**	1.40	1.35	1.35

Key Generating Facility Forced Outage Factor[4]	2.0	1.6	1.5[5]	NR[6]	**NR**	2.0	2.0	1.8
CSAT Index [Customer Satisfaction Index: % of customers satisfied or very satisfied]	86.8	85.0	86.0	85.0	**85.0**	85.0	85.0	85.0
Progressive Aboriginal Relations Designation[7]	Gold	Gold	Gold	Gold	**Gold**	Gold	Gold	Gold

[1] Performance Measure descriptions, rationale, data source information and benchmarking is available online at www.bchydro.com/performance.

[2] Annual targets are based on a number of factors including long-term historic reliability trending, current year performance, previous years investments and future years investment plans. The 2017/18 target for SAIDI has been adjusted to reflect these factors but remains in line with historical performance.

Note: Reliability targets are based on specific values, however performance within 10 per cent is considered acceptable given the wide range of variations in weather patterns and uncontrollable elements that can significantly disrupt the electrical system. BC Hydro measures reliability under normal circumstances, because major events are not predictable and largely uncontrollable. The reliability measure is therefore based on data that excludes major events. BC Hydro reviews performance during major events and takes the performance into consideration in reliability improvement initiatives.

[3] 2013/14 actuals have been calculated based on the latest available data and may be different than previously stated.

[4] A forced outage occurs when a generating unit is unable to start generating or doesn't stay on line as long as needed. Forced Outage Factor is defined as the total forced outage time in a period relative to the total number of hours in the same period (usually one year). Annually, the Forced Outage Factor can be relatively volatile and through applying the historical five year rolling average it can smooth the range to provide a more stable measure for which targets can be set. Therefore, the strategy is to keep the Force Outage Factor below 2% of the total number of hours per year. There are seven Key Generating Facilities, representing those plants with installed capacity greater than 200MW. Together they provide 90% of the average annual electricity generated by BC Hydro's facilities. This measurement will show the trend of how the assets are performing and aligns with how asset management investments decisions are made to maintain asset reliability that is reflected in a low forced outage factor.

[5] This is a new measure introduced for 2016/17; however, historical information has been provided for context.

[6] NR (Not Reported) as this is a new measure, there were no targets set for the 2015/16 year.

[7] BC Hydro attained a gold-level designation from the Canadian Council for Aboriginal Business in 2015/16 which is valid for a three year period. In 2018/19, BC Hydro will apply for the next certification.

Discussion New Measure - Key Generating Facility Forced Outage Factor replaces the previous Winter Generation Availability measure. With recent additions of capacity resources and long term planning criteria of capacity self-sufficiency, the risk to winter service reliability has decreased and in response, BC Hydro is removing the Winter Generation measure. Given the aging generating assets, BC Hydro is now refocussing on the performance of the Key Generating Facility units by measuring their Forced Outage Factor. This factor is one indicator of the units' health and provides both leading and lagging information on the effectiveness of BC Hydro's maintenance and capital investment programs. Forced Outage Factor is commonly used by electric utilities and industry benchmarks exist for comparative performance assessment. This new measure will allow for optimal outage planning throughout the year, including winter.

Goal 2: Ensure Rates are Among the Most Affordable in North America

BC Hydro customers will continue to have low, predictable rates while we efficiently manage our costs and make important investments to maintain and expand our system.

Strategies

- Prudently implement the Integrated Resource Plan recommendations and the 10 Year Capital Plan while keeping electricity rates low and predictable which will be reflected in the Revenue Requirements and Rate Design Applications to the BC Utilities Commission.
- Improve how we operate by focusing on safety, operational excellence, efficiency and reliability by enhancing work delivery methods as well as resourcing and supply chain strategies.
- Build Site C - a third dam and generating station on the Peace River, which is the most cost-effective way to meet the long–term need for energy and dependable capacity - on time and on budget.
- Implement a scalable and consistent project delivery practice to actively manage project risks and apply industry best practices to deliver projects on time and on budget.

Performance Measure 6-7[1]

Performance Measures	Four Year Avg.	Actual 2013/14	Actual 2014/15	Target 2015/16	**Forecast 2015/16**	Target 2016/17	Target 2017/18	Target 2018/19
Competitive Rates[2]	1st quartile	1st quartile	1st quartile	1st quartile	**1st quartile**	1st quartile	1st quartile	1st quartile
Project Budget to Actual Cost[3]	-1.8% on $3.94 billion[4]	-4.75% on $3.33 billion[5]	-1.8% on $3.94 billion[4]	Within +5% to -5% of budget excluding project reserve amounts	**Within +5% to -5% of budget excluding project reserve amounts**	Within +5% to -5% of budget excluding project reserve amounts	Within +5% to -5% of budget excluding project reserve amounts	Within +5% to -5% of budget excluding project reserve amounts

[1] Performance Measure definitions, rationales, data sources, and benchmarking information are available at www.bchydro.com/performance.

[2] Based on BC Hydro's ranking in the residential category in the annual HydroQuebec Report on Electricity Rates in North America. BC Hydro calculates a relative index for each usage level within the residential category and then calculates an average of the index to create an overall ranking. The rankings of the 21 participating utilities are then divided into quartiles to determine BC Hydro's ranking. Based on this same methodology, BC Hydro's rates for commercial and industrial customers rank fourth and fifth lowest in the report.

[3] The data includes Generation, Substation and Transmission Line projects managed by Project Delivery. Annually, BC Hydro reflects the past five years' performance in delivering capital projects. This is a five year rolling data set of actual costs compared to original approved full scope implementation budgets not including project reserve amounts, for capital projects that were put into service during the period.

[4] This is a five year rolling average reflecting 2010/11 to 2014/15.

[5] This is a five year rolling average reflecting 2009/10 to 2013/14.

Discussion - Project Budget to Actual Cost is an important measure for evaluating financial performance in delivering large capital projects. The measure captures a five year rolling data set of actual costs compared to original approved full scope implementation budgets excluding project reserve funds, for capital projects that were put into service during the period. The +/- 5% target is the same over the plan period as it is the objective to have the entire project portfolio (Generation, Substation and Transmission Line) in-service within this financial range. Over the past five years, BC Hydro has delivered 563 capital projects at a total cost of $3.94 billion, which is 1.8% under budget in aggregate.

Goal 3: Continue British Columbia's Leading Commitment to Renewable, Clean Power

BC Hydro will strengthen its legacy of renewable, clean power and energy conservation investments by implementing its energy conservation plan and by identifying and securing new competitively priced energy and capacity options to meet future customer needs.

Strategies

- Meet the *Clean Energy Act* objective that at least 93 percent of electricity generation be from renewable, clean resources by implementing the Integrated Resource Plan recommendations, including renewing expiring electricity purchase agreements (EPAs) on a cost of service basis and by implementing the Memorandum of Understanding with Clean Energy BC which includes exploring opportunities to acquire dependable capacity resources through the Standing Offer Program.
- Implement the energy conservation plan, which will exceed the *Clean Energy Act* objective to meet at least two-thirds of future demand growth through conservation and other energy management measures by 2020.
- Continue to provide opportunities for First Nations in non-integrated areas through established renewable energy programs.

Performance Measures 8-9[1]

Performance Measures	Four Year Avg.	Actual 2013/14	Actual 2014/15	Target 2015/16	Forecast 2015/16	Target 2016/17	Target 2017/18	Target 2018/19
Energy Conservation Portfolio (New Incremental GWh/year)[2]	800	500	700[3]	NR[4]	**NR**	700	700	600
Clean Energy (%)[5]	97.8	97.1	97.9	93.0	**98.6**	93.0	93.0	93.0

[1] Performance Measure descriptions, rationale, data source information and benchmarking is available online at www.bchydro.com/performance.

[2] Reflects the annual new incremental electricity savings resulting from DSM portfolio results including programs, codes and standards and conservation rates. This metric is a reflection of performance within the current period and as such is not impacted by past performance and/or adjustments made to energy savings in prior years (e.g., persistence, evaluations, measurement and verification).

[3] This is a new measure introduced for 2016/17; however, historical information has been provided for context.

[4] NR (Not Reported) as this is a new measure, there were no targets set for the 2015/16 year.

[5] The Clean Energy performance measure represents the minimum threshold generation output in accordance with the B.C. Government's requirement that at least 93 per cent of electricity generation in the province be from clean or renewable resources. BC Hydro's forecast is based on expected generation and is consistent with previous years.

Discussion New Measure - New Incremental Energy Conservation Portfolio Energy Savings (GWh/yr) replaces the previous Cumulative Demand Side Management Energy Savings. BC Hydro continues to implement its plan to achieve or exceed the *Clean Energy Act* target to meet at least 66% of incremental demand from 2008 to 2020 through conservation. This new metric is a better reflection of performance within the operating period because it is based on the new incremental energy savings from programs, codes and standards and conservation rates that are implemented within the period. In some cases, the implementation date for anticipated codes and standards can shift, which will cause actual incremental energy savings to vary from the targets that have been set for the period.

Goal 4: Safety Above All

BC Hydro's number one priority is ensuring its workforce goes home safely every day and that the public is safe around our system.

Strategies

- Implement the five-year safety strategy with key elements that include:
  - Maintaining a culture where safety is a core value through demonstrating seen and felt safety leadership; supporting the courage to intervene where anyone can stop unsafe work; improving safety awareness and communication; and, learning from injury and near miss incidents to prevent re-occurrence.
  - Enhance frontline accountability for safety by establishing clear roles and accountabilities; developing a leading-class safety management system; and, continuing to leverage the joint health and safety committees to identify hazards and risks.
  - Strengthening safety competencies for employees and contractors around our: Life Saving Rules, Arc flash, asbestos and confined space hazards; improving job planning, hazard identification and the use of multiple barriers; and providing frontline and crew leadership training.
  - Incorporating safety into the strategy and planning process by reviewing and considering safety risks to our employees, contractors and the public in maintenance budgets and designs for capital projects.

Performance Measures 10-12[1]

Performance Measures	Four Year Avg.	Actual 2013/14	Actual 2014/15	Target 2015/16	Forecast 2015/16	Target 2016/17	Target 2017/18	Target 2018/19
Zero Fatality & Serious Injury[2] [Loss of life or the injury has resulted in a permanent disability]	0.75	0	1[3]	0	**0**	0	0	0
Lost Time Injury Frequency[2,4] [Number of employee injury incidents resulting in lost time (beyond the day of the injury) per 200,000 hours worked]	1.1	1.1[5]	1.0	1.0	**1.2**	1.0	0.9	0.8
Timely Completion of Corrective Actions (%)[6]	84%	84%	78%[7]	NR[8]	NR	85%	90%	95%

[1] Performance Measure descriptions, rationale, data source information and benchmarking is available online at www.bchydro.com/performance

[2] BC Hydro's safety performance measures do not include contractor or public safety injuries or fatalities.

[3] The 2014/15 actual reflects that a serious injury from an electrical contact occurred November 2014.
[4] Focusing on Lost Time Injury Frequency encourages managers to identify modified work duties for job categories and locations where workers experience injury, enabling injured workers to stay on the job while they recover. The earlier an injured worker is able to safely return to productive employment and maintain his or her positive connection to the workplace, the more likely he or she is of obtaining maximum recovery. With the increased granularity this metric provides, the organization is better able to focus its efforts on managing the hazards that can lead to Lost Time injuries.
[5] Prior years' results have been calculated based on the latest available data and may be different than previously stated.
[6] New Measure – defined as the percentage of safety corrective actions closed within 30 days of the original scheduled due date on an annual basis, with an aim to improve over time.
[7] This is a new measure introduced for 2016/17; however, historical information has been provided for context.
[8] NR (Not Reported) as this is a new measure, there were no targets set for the 2015/16 year.

Discussion New Measure – Timely Completion of Corrective Actions. The purpose of this measure is to track corrective actions that have been put in place from safety incidents (injuries and near misses) to improve our safety performance. It demonstrates that we are a learning organization with a focus on improving practices in a timely way from identified deficiencies that have a direct impact on the safety of our workforce. By implementing this measure, we will see systemic deficiencies corrected and our workforce will experience lower frequency of recurring issues. This measure tracks the percentage of safety corrective actions closed within 30 days of the original scheduled due date on an annual basis. The target is to increase the percentage of corrective actions completed within 30 days of the original due date by five percent per year for each of the next three years.

Measures removed from 2016/17 - 2018/19 Service Plan

BC Hydro removed 10 measures from its Service Plan to reflect the Service Plan guidelines and changes in business strategy and focus. The Service Plan is an accountability requirement for the Province and upon review, many of the performance measures are better suited for internal reporting purposes, or through other public mechanisms such as our website at bchydro.com.
For a list of the measures removed, see Appendix A.

Financial Plan

Summary Financial Outlook

Consolidated Statement of Operations[1] ($ millions)	2014/15 Actual	2015/16 Forecast	2016/17 Forecast	2017/18 Forecast	2018/19 Forecast
Revenues ($000)					
Domestic	4,829	5,052	5,334	5,513	5,754
Trade	919	593	614	623	614
Total Revenues	**5,748**	**5,645**	**5,949**	**6,136**	**6,368**
Expenses ($000)					
Operating Costs					
Cost of Energy	2,203	1,844	2,135	2,184	2,223
Personnel expenses, materials & external services[2]	868	902	974	1,022	1,050
Amortization	1,205	1,248	1,202	1,228	1,297
Finance charges	632	751	627	679	736
Grants and taxes	209	216	230	239	244
Other Operating Costs	50	30	87	78	98
Total	**5,167**	**4,992**	**5,256**	**5,430**	**5,648**
Net Income	**581**	**653**	**692**	**706**	**720**
Net Debt[3]	**16,682**	**17,979**	**19,710**	**20,803**	**21,903**
Equity	**4,170**	**4,495**	**4,928**	**5,474**	**6,135**
Capital Expenditures	**2,169**	**2,337**	**2,832**	**2,448**	**2,713**

[1] Table may not add due to rounding.

[2] These amounts are net of capitalized overhead and consists of the following:

	2014/15	2015/16	2016/17	2017/18	2018/19
Domestic Base Operating Costs	710	713	752	752	764
Other	158	190	223	270	286
	868	902	974	1,022	1,050

Commencing in 2016/17, Domestic Base Operating Costs include net sustainment costs related to the Smart Metering & Infrastucture Program which were incurred in previous years but which were subject to regulatory deferral in those years. For 2016/17, these net sustainment costs are $22 million. Other largely consists of Powerex & Powertech operating costs, operating costs related to energy purchase agreements accounted for as capital leases, and the transitioning of IFRS-ineligible capital overhead into operating costs over a 10-year period.

[3] Debt figures are net of sinking funds and cash and cash equivalents.

Key Forecast Assumptions

Key Assumptions	2014/15 Actual	2015/16 Forecast	2016/17 Forecast	2017/18 Forecast	2018/19 Forecast
Growth and Load					
B.C. Real Gross Domestic Product Growth (%)[1]	2.2	2.3	2.4	2.3	2.3
Domestic Sales Load Growth (%)[2,3]	(3.41)	14.20	(3.06)	0.69	1.27
Residential Sales Load Growth (%)[2]	(5.11)	3.57	3.62	0.40	0.60
Light Industrial and Commercial Sales Load Growth (%)[2]	0.34	1.39	0.03	0.38	0.62
Large Industrial Sales Load Growth (%)[2]	0.19	(1.24)	3.35	4.68	7.64
Domestic Load (GWh):					
Domestic Sales Volume (GWh)[3]	51,213	58,483	56,692	57,083	57,805
Line Loss and System Use (GWh)	4,529	5,173	5,199	5,256	5,373
Total Domestic Load (GWh)	55,742	63,656	61,890	62,339	63,178
Energy Generation					
Total System Water Inflows (% of average)	102	94	100	100	100
Sources of Supply to Meet Domestic Load:					
Net Hydro Generation (GWh)	41,830	49,115	46,495	45,987	46,633
Market Electricity Purchases (GWh)[4]	207	544	962	846	1,123
Independent Power Producers and Long-term Purchases (GWh)	13,377	13,651	14,092	15,155	15,069
Thermal Generation (GWh)	328	346	341	351	353
Sources of Supply for Domestic Load (GWh)	55,742	63,656	61,890	62,339	63,178
Average Mid-C Price (U.S.$/MWh)	27.16	25.93	24.15	25.34	26.79
Average Natural Gas Price at Sumas (U.S.$/MMBTU)	3.55	2.44	2.46	2.62	2.78
Financial					
Canadian Short-Term Interest Rates (%)[5]	1.22	0.58	0.68	1.10	1.98
Canadian Long-Term Interest Rates (%)[5]	2.83	2.57	3.05	3.67	4.55
Foreign Exchange Rate (U.S.$:Cdn$)[5]	0.8782	0.7659	0.7646	0.7941	0.8111

[1] Economic assumption based on calendar year, from Ministry of Finance 2015 February Budget.
[2] Includes the impact of Demand-Side Management programs.
[3] Includes surplus sales volume, which can vary year to year based on level and timing of inflows, risk of spill and market conditions. Forecast surplus sales are higher in 2015/16 due to high storage levels at the end of 2014/15 and the need to manage reservoir levels to reduce spill risk, as well as to meet Columbia River Treaty obligations in 2015/16.
[4] Assumes that gas fired power generation capability available to service domestic demand is sometimes displaced by more cost-effective market purchases.
[5] 2014/15 three months rate for short term and 10 years for long term. 2015/16 to 2018/19, financial assumptions from Ministry of Finance, October 2015.

Sensitivity Analysis

Factor	Change	Approximate change in 2016/17 earnings before regulatory account transfers (in $ millions)
Hydro Generation (GWh)[1]	+/- 1%	10
Electricity trade margins	+/- 10%	20
Interest rates	+/- 100 basis points	40
Exchange rates (US/ CDN)	$0.01	5
Weather	10% change in normal degree days	35

[1] Assumes a change in hydro generation is offset by corresponding change in energy imports. (i.e. increase in hydro generation is offset by decrease in energy imports.)

Management Perspective on Future Financial Outlook

In November 2013, the Province, as part of the 10 Year Rates Plan, announced rate increases for BC Hydro in 2014/15 and 2015/16 of 9 per cent and 6 per cent, respectively, with rate increases for 2016/17 to 2018/19 capped at 4 per cent, 3.5 per cent and 3 per cent. The 10 Year Rates Plan included several actions to reduce pressure on rates, including eliminating tier three water rental rates, lowering the return on equity, reducing dividends and smoothing general rate increases through the use of a regulatory account.

BC Hydro prepared the current financial projections for revenues and expenses through 2018/19 which were approved by the Board and submitted to the Ministry of Finance in January 2016. These financial projections are consistent with the 10 Year Rates Plan.

Capital Plan and Major Projects

Capital Expenditure by Year and Type and Function

($millions)	2014/15 Actual	2015/16 Forecast	2016/17 Forecast	2017/18 Forecast	2018/19 Forecast
Capital Expenditures by Type[1]					
Sustaining	1,005	1,165	1,282	1,343	1,325
Growth	1,164	1,172	1,550	1,105	1,388
Subtotal – BC Hydro Capital Expenditures before CIA	2,169	2,337	2,832	2,448	2,713
Contributions-in-Aid (CIA)[2]	(334)	(94)	(124)	(148)	(163)
Total – BC Hydro Capital Expenditures net of CIA	1,835	2,243	2,708	2,300	2,550
Generation	526	552	520	595	597
Transmission and Distribution	1,367	1,119	1,166	984	1,081
Properties, Technology and Other	251	284	285	293	259
Site C	25	382	861	576	776
Subtotal – BC Hydro Capital Expenditures before CIA	2,169	2,337	2,832	2,448	2,713
CIA	(334)	(94)	(124)	(148)	(163)
Total BC Hydro Capital Expenditures net of CIA	1,835	2,243	2,708	2,300	2,550

[1] BC Hydro classifies capital expenditures as either sustaining capital or growth capital:

- Sustaining capital includes expenditures to ensure the continued availability and reliability of generation, transmission and distribution facilities. It also includes expenditures to support the business, such as vehicles and information technology.
- Growth capital is required to meet customer load growth and other business investments. Growth capital expenditures relate to the expansion of existing generation assets as well as expansion and reinforcement of the transmission and distribution system, and includes Site C.

[2] Contributions in aid of construction are amounts paid by certain customers toward the cost of property, plant and equipment required for the extension of services to supply electricity.

Projects over $50 million

BC Hydro has the following projects, each with capital costs expected to exceed $50 million, listed according to targeted completion date. These projects have been approved by the Board of Directors.

Capital Project	Targeted Completion Date (calendar year)	Approved Anticipated Total Cost ($ millions)	Life to Date (LTD) Cost as of December 31, 2015 ($ millions)
Projects Recently Put Into Service			
G.M. Shrum Units 1 to 5 Turbine Replacement Replace the Units 1 to 5 turbines to reduce the risk of runner failure, decrease maintenance costs and improve operating efficiency.	October 2015 In-Service	$185	$167
Hugh Keenleyside Spillway Gate Reliability Upgrade Upgrade the spillway gates at the Hugh Keenleyside Dam to increase public and employee safety by ensuring the gates meet flood discharge reliability requirements. *Spillway gates control the amount of water that can be discharged from the reservoir. They are generally used in times of flood to pass high inflows.*	October 2015 In-Service	$123	$106
Dawson Creek/Chetwynd Area Transmission Project The project will expand the Peace Region 230 kV transmission system to the Dawson Creek/Chetwynd Area to supply the area's load growth. The solution will include the construction of new 230 kV lines between Dawson Creek and Bear Mountain Terminal (BMT), and from BMT to a new substation called Sundance Lake Substation, located approximately 19 km east of Chetwynd.	November 2015 In-Service	$296	$280

Capital Project	Targeted Completion Date (calendar year)	Approved Anticipated Total Cost ($ millions)	Life to Date (LTD) Cost as of December 31, 2015 ($ millions)
Projects Recently Put Into Service			
Long Beach Area Reinforcement Expansion of Long Beach and Great Central Lake substations with two new transformers at each and capacitor banks at Long Beach to support the load growth and provide voltage support in the area.	October 2015 In-Service	$56	$35
Merritt Area Transmission Project Construct a new 138 kV transmission line between the Merritt and Highland substations; add a new Merritt Substation and new equipment at the Highland Substation to meet the increased demand for power in the Merritt area.	November 2015 In-Service	$65	$55
Interior to Lower Mainland Transmission Line Project Construct a new 500 kV transmission line, approximately 247 km in length, between the Nicola Substation near Merritt and the Meridian Substation in Coquitlam and build a new series capacitor station at Ruby Creek near Agassiz to help meet domestic load growth in the Lower Mainland. * The forecasted budget for the project increased by $18 million. The revised budget is still within the upper cost limit submitted to the BC Utilities Commission in 2007. The project cost increase is a result of schedule delays by the primary contractor and challenges related to building a line in some of the most challenging terrain in North America.	December 2015 In-Service	$743*	$699

Capital Project	Targeted Completion Date (calendar year)	Approved Anticipated Total Cost ($ millions)	Life to Date (LTD) Cost as of December 31, 2015 ($ millions)
Projects Recently Put Into Service			
Smart Metering & Infrastructure Program The Smart Metering and Infrastructure Program includes the installation of 1.9 million smart meters in homes and businesses across the province, an advanced telecommunications infrastructure to support electricity system management and customer applications, and information technology to support customer billing, load forecasting and outage management systems. *Smart Metering & Infrastructure Program amount includes both capital costs and operating expenditures subject to regulatory deferral.*	December 2015 In-Service	$780	$762
Upper Columbia Capacity Additions at Mica – Units 5 & 6 Install two additional 500 MW generating units into existing unit bays at the Mica Generating Station. The new units are similar to the four existing units, but with more efficient turbines.	December 2015 In-Service	$714	$557
Ongoing			
Surrey Area Substation Project Construct a new 200 MVA 230/25 kV substation in the Fleetwood area of Surrey. The station will be supplied from the adjacent 230 kV transmission line and will allow for future expansion to 400 MVA to service high load growth in the Fraser Valley West area. Construction of this new Fleetwood Substation will also allow for the decommissioning of four ageing substations in the Surrey/Langley area.	2016 Targeted In-Service	$94	$72

Capital Project	Targeted Completion Date (calendar year)	Approved Anticipated Total Cost ($ millions)	Life to Date (LTD) Cost as of December 31, 2015 ($ millions)
Ongoing			
Big Bend Substation The South Burnaby, Big Bend area requires a new, 100 MVA, 69/12 kV substation to meet local residential and commercial load growth. * BC Hydro updated the cost estimate for the Big Bend Substation Project from $56 million to $67 million, prior to the start of construction to reflect new information from geotechnical investigations of the site and higher market prices for construction.	2017 Targeted In-Service	$67*	$31
Ruskin Dam Safety and Powerhouse Upgrade Improve seismically deficient dam and rehabilitation/replacement of powerhouse equipment that was brought into service between 1930 and 1950. The project includes: upgrading of the right abutment; redeveloping the dam and powerhouse to meet current seismic standards for earthquakes; and replace major generation equipment which is in poor unsatisfactory condition.	2017 Targeted In-Service	$748	$390
Horne Payne Substation Project (NEW) Expand the Horne Payne Substation with the addition of two 230/25kV, 150MVA transformers, gas-insulated (GIS) feeder sections, and a new control building. This project will increase the firm capacity of the substation, add needed feeder positions, facilitate the gradual conversion of the area supply voltage from 12kV to 25kV, and allow for the implementation of an open-loop distribution system.	2018 Targeted In-Service	$93	$3

Capital Project	Targeted Completion Date (calendar year)	Approved Anticipated Total Cost ($ millions)	Life to Date (LTD) Cost as of December 31, 2015 ($ millions)
Ongoing			
Cheakamus Unit 1 and Unit 2 Generator Replacement Replace the two generators at Cheakamus generating station (in operation since 1957) to address the poor condition and known deficiencies which will increase the capacity of each unit from 70 MW to 90 MW.	2019 Targeted In-Service	$74	$5
John Hart Generating Station Replacement Replace the existing six-unit 126 MW generating station (in operation since 1947) and add integrated emergency bypass capability to ensure reliable long-term generation and to mitigate earthquake risk and environmental risk to fish and fish habitat.	2019 Targeted In-Service	$1,093	$403
Fort St. John and Taylor Electric Supply (NEW) This project will maintain adequate supply capability, reduce line losses and improve reliability to the loads in the Fort St. John and Taylor areas by re-terminating 138kV transmission lines 1L360 and 1L374 at the new Site C switchyard.	2019 Targeted In-Service	$53	$Nil

Capital Project	Targeted Completion Date (calendar year)	Approved Anticipated Total Cost ($ millions)	Life to Date (LTD) Cost as of December 31, 2015 ($ millions)
Ongoing			
G.M. Shrum G1-G10 Control System Upgrade (NEW) The condition of the legacy controls for GMS generating units, which were originally installed in the 1960s and 1970s, is of growing concern due to increasing maintenance requirements, lack of spare parts availability and decreasing reliability. The controls are well beyond their expected life, cause operating problems and increase the risk of damage to major equipment. The project will replace the controls equipment, provide full remote control capability from the remote control center and rectify deficiencies in the current system.	2021 Targeted In-Service	$60 (Partial Implementation Funding)	$7
Site C Clean Energy Project Site C will be a third dam and hydroelectric generating station on the Peace River approximately seven kilometres southwest of Fort St. John. It will be capable of producing approximately 5,100 gigawatt-hours of electricity annually and 1,100 megawatts of capacity. Site C project was approved by the Provincial Government in December 2014. Site C will provide clean, renewable and cost-effective power in B.C. for more than 100 years. **Planned in-service date for all units. This timeline reflects the project's current schedule and is subject to change based on a review of the construction schedule.* ***Site C forecast and life-to-date amounts include both capital costs and expenditures subject to regulatory deferral. Total cost excludes the Project Reserve of $440 million (established by Government to account for events outside of BC Hydro's control that could occur during construction) which is held by the Treasury Board.*	2024* Targeted In-Service	$8,335**	$694

Appendix A:

Corporate Governance

Information about Corporate Governance can be found at:
http://www.bchydro.com/about/accountability_reports/financial_reports/service_plan.html.

This includes links to information regarding:

- Board of Directors
- Executive Team
- Code of Conduct

Operating Environment

Information about BC Hydro's Operating Environment can be found at:
http://www.bchydro.com/about/accountability_reports/financial_reports/service_plan.html.

This includes links to information regarding:

- About BC Hydro: Organizational Overview
- Mandate and Legislation
- Risks and Opportunities
- Performance Measures Data Analysis, Benchmarking and Rationale

Measures removed from the 2016/17 – 2018/19 Service Plan

- CAIDI
- CEMI-4
- Severity
- Billing Accuracy
- First Call Resolution
- Electricity Production GHG Emissions
- Employee Engagement
- Carbon Neutral Program Emissions
- Operating Costs
- Net Income

Appendix B:

Subsidiaries and Operating Segments

Active Subsidiaries

BC Hydro has created or retained a number of other subsidiaries for various purposes, including holding licenses in other jurisdictions, to manage real estate holdings and to manage various risks.

Powerex Corp.

Powerex Corp. is a wholly-owned subsidiary of BC Hydro and a key participant in energy markets across North America, buying and supplying wholesale power, renewable energy, natural gas, ancillary services, and financial energy products and services. Established in 1988, its export, marketing and trade activities help manage BC Hydro's electric system resources and provide significant economic benefits to British Columbia.

Powerex supports BC Hydro's electric system requirements through importing and exporting energy as required in addition to meeting its own trade commitments. Powerex also markets, on behalf of the Province, the Canadian Entitlement to the Downstream Benefits of the Columbia River Treaty.

The Chief Executive Officer (CEO) of Powerex reports directly to the Board of Directors of Powerex through the Chair of Powerex and works closely with the President & CEO of BC Hydro as a member of the Executive Team. The Chair of the Powerex Board, the Powerex CEO and BC Hydro's Chief Executive Officer (who is also a member of the Powerex Board), ensure the Board of BC Hydro is informed of Powerex's key strategies and business activities.

Powerex operates in complex and volatile energy-markets, which can cause net income in any given year to vary significantly. Market and economic conditions, reduced BC Hydro system flexibility, income timing differences and the strength of the Canadian dollar can materially impact Powerex net income. Over the previous five years, Powerex income has ranged from $72 to $142 million (2010/11 to 2014/15). The Service Plan forecast includes annual net income from Powerex of approximately $120 million per year for 2016/17 to 2018/19. For more information, visit powerex.com.

Powertech Labs Inc.

Powertech Labs, operating in Surrey since its inception in 1979, is a wholly-owned subsidiary of BC Hydro. Powertech is internationally recognized as holding expertise in various fields of operation, and provides research and development, testing, technical services and advanced technology services to the international energy community including BC Hydro.

Powertech's revenue in 2014/15 was $30 million with a net income of $4.2 million. The Service Plan forecast includes annual net income from Powertech ranging from $4.0 million to $6 million for 2015/16 to 2018/19. For more information, visit powertechlabs.com.

All the staff and management needs of the active subsidiaries below are fulfilled by BC Hydro employees, who perform these duties without additional remuneration. Three of these subsidiaries are considered active:

BCHPA Captive Insurance Company Ltd
Procures insurance products and services on behalf of BC Hydro.

Columbia Hydro Constructors Ltd
Administers and supplies the labour force to specified projects.

Tongass Power and Light Company
Provides electrical power to Hyder, Alaska due to its remoteness from the Alaska electrical system.

Nominee Holding Companies and/or Inactive/Dormant Subsidiaries

BC Hydro's remaining subsidiaries either serve as nominee holding companies (indicated with an *) or are considered to be inactive/dormant. The inactive/dormant subsidiaries do not carry on active operations. As of December 31, 2015, these other subsidiaries consisted of the following:

1. British Columbia Hydro International Limited
2. British Columbia Power Exchange Corporation
3. British Columbia Power Export Corporation
4. British Columbia Transmission Corporation
5. Columbia Estate Company Limited*
6. Edmonds Centre Developments Limited*
7. Fauquier Water and Sewerage Corporation
8. Hydro Monitoring (Alberta) Inc.*
9. Waneta Holdings (US) Inc.*
10. Victoria Gas Company Limited